Mercedes-Benz USA, LLC
A Daimler Company

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Framework for Next Generation 911	)	
Deployment	)	PS Docket No. 10-255
	)	
	)	

TO: The Commission

REPLY COMMENTS
BY THE
MERCEDES-BENZ USA, LLC

Mercedes-Benz USA, LLC (MBUSA) hereby submits the following reply comments in the above captioned matter.[1]

Mercedes-Benz USA, LLC (MBUSA) submits supporting and reply comments on behalf of its parent company, Daimler Aktiengesellschaft (DAG). MBUSA is responsible for the sales, marketing and customer service for all Mercedes-Benz, and Maybach products in the United States and offers drivers the most diverse line-up in the luxury segment with 12 model lines ranging from the sporty C-Class to the flagship S-Class sedans and the SLS AMG supercar. MBUSA is also responsible for the distribution, marketing and customer service of Mercedes-Benz Sprinter Vans in the US.

As an innovator of new vehicle safety technologies, we appreciate this opportunity to provide comments and we applaud the Commission's comprehensive approach in seeking comments in their Notice of Inquiry (NOI) on the Framework for the Next Generation 911 (NG911) Deployment. The broad NG911 issues and questions discussed in the NOI include numerous technical, operational, legal and public policy issues that will impact vehicle drivers at one end, and first responders at the other end of the emergency calling system with a complex array of delivery systems in between. We strongly endorse the comments[2] submitted by Intrado, Inc./Intrado Communications, Inc. with respect to the importance of specifying uniform technical standards, preferably

---

[1] In the Matter of Framework for Next Generation 911 Deployment, *Notice of Inquiry*, FCC 10-200, PS Docket No. 10-255 (December 21, 2010).

[2] *See* Comments of Intrado Inc. and Intrado Communications, Inc. from Craig W. Donaldson, Senior Vice President for Regulatory and Government Affairs to Ms. Marlene H. Dortch, Secretary, Federal Communications Commission, MB Docket No. 10-255 (February 28, 2011).

Mercedes-Benz USA, LLC
One Mercedes Drive
P.O. Box 350
Montvale, NJ 07645-0350
Phone (201) 573-0600
Fax (201) 573-0117
www.MBUSA.com

American National Standards Institute (ANSI), but we would include appropriate Society of Automotive Engineers (SAE) standards. We believe both standards-setting bodies are central to the deployment of next generation networks (NGNs) as well as the applications and services they will deliver.

We believe that the specification of well-defined standards play an important role by defining system interoperability as well as providing public documentation available for use in future problem solving. It enhances competition and innovation by allowing multiple vendors to create system-compatible components on either side of any interfaces. Due to the primary involvement and deployment of NG911 applications in automotive vehicles, MBUSA has historical experience working within SAE in developing applicable SAE standards (e.g., Recommended Practices) for direct use by vehicle manufacturers and parts & service suppliers. In fact, SAE standards are accepted or accredited by ANSI for implementation throughout the automotive industry. Also, the National Highway Traffic Safety Administration (NHTSA) which has primary safety regulatory authority over the automobile industry has implemented numerous federal safety standards and regulations that directly cite, or 'incorporation by reference' of over 400 SAE Recommended Practices. Using accredited ANSI and/or SAE standards developed for NG911, especially for automotive vehicles, would ensure overall interoperability and would assist in the coordination and synchronization of a broader communications network as it evolves.

EMERGENCY RESPONSE AND AUTOMOTIVE TELEMATICS

MBUSA currently uses Hughes Telematics, Inc. (HTI) as its service provider for telematics services. HTI's technology provides our vehicle owners with enhanced mobile safety, security, and driving convenience. HTI's current telematics offering provides safety-related services such as, location-specific and data-rich crash, emergency roadside assistance, stolen vehicle recovery, and remote door unlock. Plus, remote door lock is available on certain model lines.

In emergency situations, Intrado, Inc., partnered with HTI, acts as our response specialist. Intrado, Inc. is trained on a curriculum based on the APCO Telecommunicator Training Program for emergency 911 responses. Intrado's call center located in Colorado is available 24 hours a day, and all Automatic Crash Notifications (ACNs) and/or vehicle occupant's SOS button presses are screened by this call center. Intrado then contacts local 911 response centers to dispatch help as needed. HTI's overall integrated and customized services assist MBUSA and its dealer network to use telematics data and various customer contact channels to reduce costs, while enhancing vehicle servicing to more closely manage our customers relationships and contacts with their vehicle.

Every telematics-generated, vehicle emergency signal allows MBUSA via HTI to receive a GPS satellite-generated data link including an open, two-way voice channel into the vehicle. Response specialists screen information from the vehicle occupants and

assess whether there is an emergency warranting notification of emergency responders[3] and if so, they document specific details about the emergency in a structured and coherent format. This critical location and crash scene information is supplemented with customer-owner information about both the vehicle and its owners pulled from MBUSA & HTI servers.[4] The aggregated information is then communicated[5] by the HTI response specialist via an interconnected Voice Over Internet Protocol (VOIP) networks and routed, via Intrado, Inc., into native 911 trunk lines to the appropriate PSAP with jurisdiction of the vehicle's location. HTI is able to transmit to capable Public Service Answering Points (PSAPs) locations, data elements and call back information. In circumstances where the voice channel is impaired, HTI is still able to obtain and provide vehicle location information and sends this information automatically to emergency responders.

HTI response specialists continue to monitor the accident scene via the in-vehicle audio connection. The technology enables immediate re-connection with the PSAP should new details about the emergency emerge such as congestion at the scene, change in conditions or weather variations as responders are *en route*. Our telematics services are able, if the need arises, to conference in a PSAP's emergency medical dispatcher to provide immediate medical advice prior to the responder's arrival.

Since its introduction, MBUSA ACN technology, called 'mbrace,' is designed to accelerate and improve the quality of emergency response to the vehicle by providing response agencies with quicker notification, and more information about the incident to help optimize the response. For example, the mbrace ACN system filters calls that do not require emergency medical response from those that do, and then provides precise location of the accident and the type of vehicle involved to augment local PSAP response capabilities by filtering incidents not requiring public emergency response and monitoring the accident scene and victims' condition until emergency responders arrive. From its initial deployment, the service has been ubiquitous from coast-to-coast, and is capable of interfacing with all PSAPs.

Also, HTI has the capability to collect information generated from in-vehicle crash sensors; such as, the crash intensity, direction of impact, whether the vehicle rolled, and in most of our models whether seat belts were engaged in occupied seats.[6] Due to HTI's partnership with Intrado, and with the collection of the above vehicle crash information, Intrado's response specialists can assist in determining the gender of each vehicle occupant, and by determining whether the individual is under the age of 12 or

---

[3] Approximately 10% of all ACN calls and approximately 99% of all in-vehicle button activations received by MBUSA via HTI do not require police, fire, or emergency medical response or notification.
[4] Customer information is updated by the vehicle owner or by MBUSA via a portal to a personal information page on the website associated with the telematics service. The information includes data relating to emergency contacts, cell phone, and E-mail addresses.
[5] See *APCO Recommended Best Practices – Telematics Call Processing* (July 22, 2004), http://www.apco911.org/about/Telematics/TSPFinal.pdf. Only GPS location coordinates and the callback number to the telematics call center is transmitted as data to the PSAP.
[6] Currently, seat belt determination is currently limited to the driver and front passenger only.

older than 55[7], then a calculation of the potential risk of severe and potentially life-threatening injuries to vehicle occupants[8] could be made. This information can then be verbally transmitted to the PSAP to assist in overall coordination of a proper response. In fact, recent comments from the National Emergency Number Association (NENA) noted that Advanced Automatic Collision Notification (AACN) represents a significant opportunity to lower crash fatality rates through quicker access by responders to accident scenes, more accurate predictions of injury severity, more efficient deployment of responder equipment and resources, and better utilization of hospital facilities.[9]

NG911 CHALLENGES

From MBUSA's perspective, NG911 offers a powerful incentive for additional partnerships among automotive, private, and telematics industry investments in developing technologies and processes that provides faster and more informed emergency response information. Such services would enhance safety by reducing the critical time between a vehicle collision and a vehicle occupant's trauma treatment; assist emergency responders in identifying potential vehicle occupants injury risks before arrival at a collision; and facilitate decisions on vehicle occupants' eventual transport[10] to an appropriate medical facility. NG911 provides for better facilitation and more timely post-crash and injury analysis that can be used to continuously improve our current vehicle designs and safety technologies as well as improve emergency medical response team protocols.[11]

---

[7] A vehicle occupant's age is a critical element in evaluating the level of care required in a vehicle crash as noted by Kononen, D.W., *et al; Identification and validation of a logistic regression model for predicting serious injuries associated with motor vehicle crashes.* Accid. Anal Prev. (2010), doi:10.1016/j.aap.2010.07.018. This study also addresses the advances to the initial care decision associated with Advanced Automatic Crash Notification (AACN).

[8] The Lehman Research Center at the University of Miami and the University of Michigan's Center for Automotive Medicine have developed algorithms which are currently being tested in pilot programs conducted by BMW North America and General Motors in collaboration with the US Centers for Disease Control and Prevention. *See* National Center for Injury Prevention and Control, *Recommendations from the Expert Panel: Advanced Automatic Collision Notification and Triage of the Injured Patient*, Centers for Disease Control and Prevention (2008) at 2, 5-6, http://www.cdc.gov/injuryresponse/pdf/AACN%20Report_Final-a.pdf .

[9] *See* comments of the National Emergency Number Association, *National Highway Traffic Safety Administration 2010-2015 Strategic Planning*, Docket No.: NHTSA 2009-0171 at 2 (January 2, 2009).

[10] *See Children Injured in Motor Vehicle Traffic Crashes*, National Highway Traffic Safety Administration, Ann Emerg Med. 2010:56:687-688, noted by the Department of Emergency Medicine, Center for Injury Prevention and Control, The George Washington University Medical Center, Washington, DC examined collisions involving children under 7 years. Presence of seat belts, booster seat, other restraints and roll over circumstances, in addition to the child's age, contribute to injury severity.

[11] *See* National Center for Injury Prevention and Control, *Recommendations from the Expert Panel: Advanced Automatic Collision Notification and Triage of the Injured Patient, Centers for Disease Control and Prevention* at 1, noted the need for initial decisions addressing the level of care in vehicle collisions and the effect on mortality. *See also* MacKenzie EJ, et al, *A National Evaluation of the Effect of Trauma-Center Care on Mortality*, New England Journal of Medicine 2006; 354(4):366-78.

NG 911 LIMITATIONS

The Commission's NOI correctly noted that "legacy 911 systems are not capable of receiving or processing (non-voice) communications, and will not be until NG911 is deployed across the country."[12] Therefore, any NG911 deployment must allow for and accommodate an entire range of IP-based technologies since NG911 data will, for instance, consist of message-based text, real-time text, still images, Web links, or real time video used to transport emergency information. As automobile companies continuously design and deploy new advanced vehicle technologies, a potential gap will exist and continue to grow between telematics information available from a vehicle and the ability of emergency responders to receive such data and act upon it. Unfortunately, although many of MBUSA vehicle model lines already have ACN as standard equipment, there still is no uniform data protocol for PSAPs to receive or connect to this technical information which prevents them from transforming this information and data into actionable intelligence.

Preliminary algorithms for interpreting crash data and thereby alerting a PSAP as to the likelihood of severe injury in a collision are already defined and being tested in the marketplace. The Commission's rule for NG911 could be instrumental in supporting the future deployment and use of standardized crash severity algorithms, as well as a uniform presentation on every 911 call screen which would allow emergency dispatchers to respond more effectively and efficiently. These interfaces would allow for better decisions in dispatch priorities as well as whether additional resources are necessary (e.g., transport by helicopter[13]) resulting in better response times in the transport of victims thus resulting in saving lives. Today's current 911 system has no uniform capability among PSAPs to identify a specific telematics call type; for instance, was the call initiated due to an airbag deployment, or activation by an in-vehicle emergency or SOS button, or pre-screened by a telematics call center[14], or an automated dial from a vehicle's pre-programmed voice message. MBUSA envisions NG911 to be a universal platform connecting a patchwork of independent platforms today among the over 6,000 existing PSAPs around the USA. There should not be just one single path in the deployment of NG911; nor should we end up with numerous varieties of NG911 networks either. Rather, the USA should have **one ubiquitous interface into all PSAPs**, thereby allowing for the free market to continue to effectively and efficiently deploy a communications platform between a vehicle and PSAPs using additional investments and robust

---

[12] *See NOI* at paragraphs 28-29.

[13] *See Science Daily, Helicopter Transport Increases Survival for Seriously Injured Patients, Study Finds (January 6, 2011),* citing a study by the University of Rochester published in The Journal of Trauma: Injury, Infection, and Critical Care relating that severely injured patients transported by helicopter from the scene of an accident are more likely to survive than patients brought to trauma centers by ground ambulance.

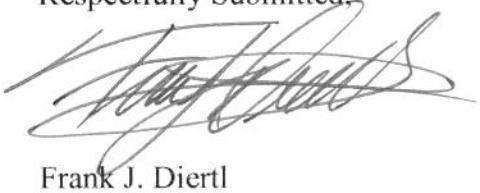
[14] Currently, telematics emergency calls are transmitted either from the vehicle to specialized third-party centers where these emergency calls are validated as true emergencies thus requiring PSAP notification, or from the vehicle's via Bluetooth-enabled wireless phone into the PSAP.

partnerships among the automotive, private, and the telematics industries, thus promoting and allowing for improved overall vehicle and highway safety.

We respectfully urge the Commission to consider these facts before you decide on these proceedings to ensure that the actions you take fully protect the millions of existing consumers who currently rely on ACN while allowing for existing and future partnerships and the free-market implementation of appropriate continuous improvements in deploying NG911.

MBUSA will continue to review the docket in this proceeding and we appreciate the Commission's consideration of our comments regarding this matter.

Respectfully Submitted,



Frank J. Diertl
General Manager
Engineering Services

March 14, 2011